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### REMARKS

Applicants request entry of the Amendment.

The present application is a continuation application of US Patent Application Serial No. 10/101,089 filed 20 March 2002 (the "parent application"). The present Amendment responds to the outstanding rejections of claims 1-60 in the Office Action mailed in connection with the parent application on May 23, 2003.

The present response is intended to be fully responsive to all points of rejection raised by the Examiner in the parent application, and is believed to place the present application in condition for allowance.

Applicants assert that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims is respectfully requested.

### Status of Claims

Claims 1-60 are pending in the application. Claims 1, 4, 6, 11, 14, 17, 21, 23, 26, 31, 40, 43, 45, 48, 49, and 58-60 have been amended.

At least claims 1, 4, 11, 23, 26, 43, 45, 48, and 58 have been amended to correct typographic errors and errors of form, and at least these amendments do not narrow the scope of the amended claims. Thus these amended claims are not subject to the complete bar against the use of the Doctrine of Equivalents as outlined in *Festo Corporation v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*

The amendments to the claims add no new matter.

### CLAIM REJECTIONS

#### 35 U.S.C. § 112 Rejections

In the Office Action in the parent application, the Examiner rejected claims 11 and 23 under 35 U.S.C. § 112 (second paragraph), as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

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Claims 11 and 23 have been amended to overcome typographic errors noted by the Examiner. It is respectfully asserted that the foregoing amendments merely address matters of form and are not being made for reasons of patentability.

Applicants respectfully assert that claims 11 and 23 as amended proper under 35 USC 112.

### 35 U.S.C. § 102 Rejections

In the Office Action in the parent application, the Examiner rejected claims 1, 2, 4, 8, 9, 11-15, 17, 20-24, 31, 32, 35-38, 40, 41, 44, 45, 47, 48, 58 and 60 under 35 U.S.C. § 102(b), as being anticipated by Masters (US Patent No. 5,216,616). Applicants respectfully traverse the rejection of claims 1, 2, 4, 8, 9, 11-15, 17, 20-24, 31, 32, 35-38, 40, 41, 44, 45, 47, 48, 58 and 60 under 35 U.S.C. § 102(b), as being anticipated by Masters in view of the remarks that follow.

Applicants claim 1, as amended requires, *inter alia*:

dispensing a first material used to form at least the three-dimensional object;

dispensing a second material used to form at least part of a support structure; and

dispensing a release layer between said 3-D object and said support structure

Applicants' claim 14 requires, *inter alia*, "a release layer between said 3-D object and said support structure." Applicants' claim 58 requires, *inter alia*, "a release material jetting means for dispensing release material between said build and support materials."

In the Office Action in the parent case the Examiner asserts that Masters teaches "dispensing a third material between said 3-D object and said support structure to form a release layer", referring to Fig. 4, reference number 49 (see pages 3 and 4 of the Office Action in the parent case).

Applicants assert that Masters teaches two materials being used to form an object and a support structure. Reference numeral 49 of Masters (48 in the text) refers to an overall support structure, rather than a release layer or release material between two materials or

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between an object and a support structure. Masters does not teach or suggest a release layer or release material between a three dimensional object and a support structure. For a reference to anticipate a claim, the reference must teach all elements of the claim. Therefore, Masters does not anticipate or render obvious claims 1, 14, or 58.

Applicants' claim 21, as amended, includes, inter alia, dispensing material to form a 3-D object, dispensing material to form a support structure, and "selectively dispensing a material to form a container capable of holding said support material." The container of Masters (Fig. 4, ref. 60) is not manufactured by dispensed material, but is part of the object creation device. Thus, Masters does not teach all elements of Applicants' claim 21, as amended, and does not anticipate claim 21.

Applicants' claim 31, as amended, includes, inter alia: "dispensing a build material and a second material which in combination form a support structure, said support structure comprising a plurality of fine pillars surrounded by said second material." Applicants' claims 40 and 60, as amended, include, inter alia: a support structure including build material and a second material, "said support structure comprising a plurality of fine pillars surrounded by said second material." Masters discloses support structures or support pillars which are single, isolated objects built from one material (See Masters, Col. 6, ll. 35-70). The support structure of Masters is not made from a combination of build material and a second material, and Masters does not include a support structure comprising a plurality of fine pillars surrounded by said second material. Thus, Masters does not teach all elements of Applicants' claims 31, 40 and 60 as amended, and does not anticipate claim 31, 40 and 60.

As discussed, independent claims 1, 14, 21, 31, 40, 58 and 60 are allowable. Since each of dependent claims 2-13, 15-20, 22-25, 32-39, 41-48 depend from, directly or indirectly, one of independent claims 1, 14, 21, 31 and 40, and therefore include all the limitations of those claims, dependent claims 2-13, 15-20, 22-25, 32-39, 41-48 are likewise allowable. Applicants respectfully assert that claims 1, 2, 4, 8, 9, 11-15, 17, 20-24, 31, 32, 35-38, 40, 41, 44, 45, 47, 48, 58 and 60 are in conformity with 35 U.S.C. § 102(b), and are not anticipated nor made obvious by Masters.

In the Office Action in the parent application, the Examiner rejected claims 26, 27, 29, 30, 49 and 50 under 35 U.S.C. § 102(b), as being anticipated by Medard et al. (US Patent No. 5,598,340). Applicants respectfully traverse the rejection of claims 26, 27, 29, 30, 49 and

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50 under 35 U.S.C. § 102(b), as being anticipated by Medard in view of the remarks that follow.

Applicants' claim 26, as amended, includes, inter alia, "a material dispenser capable of selectively dispensing" material, "wherein the material dispenser is capable of selectively dispensing material to form a support structure comprising a container capable of holding said support material."

Medard describes a system that selectively cures a vat or sheet of liquid, possibly with added solid grains or material, to form an object (see, e.g., Abstract, claim 1). Medard does not teach selectively dispensing material to form, e.g., a container. For a reference to anticipate a claim, the reference must teach all elements of the claim. Therefore, Medard does not anticipate claim 26, as amended.

Applicants independent claim 49, as amended, includes, inter alia: "selectively dispensing a support material forming a support structure for supporting said three-dimensional object; and inserting a support insert."

Medard does not describe both selectively dispensing a support structure and inserting an additional support insert; therefore Medard does not anticipate claim 49.

As discussed above, independent claims 26 and 49 are allowable. Since each of dependent claims 27-30 and 50 depend from, directly or indirectly, one of independent claims 26 and 49, and therefore include all the limitations of one of these claims, dependent claims 27-30 and 50 claims are likewise allowable. Applicants respectfully assert that claims 26-30 and 49-50 are in conformity with 35 U.S.C. § 102(b), and are neither anticipated nor made obvious by Medard.

### **35 U.S.C. § 103 Rejections**

In the Office Action in the parent application, the Examiner rejected claims 3, 5-7, 10, 16, 18-19, 33, 34, 39, 42, 43 and 46 under 35 U.S.C. § 103(a), as being unpatentable over Masters as applied to claims 1, 14, 21, 31 and 40 and further in view of the Examiner's citation of Official Notice. Applicants respectfully traverse the rejection in the parent application of claims 3, 5-7, 10, 16, 18, 19, 33, 34, 39, 42, 43 and 46 under 103(a) as being unpatentable over Masters in view of the Examiner's citation of Official Notice.

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As discussed above, Applicants' independent claims 1, 14, 21, 31 and 40 are allowable over Masters. The Examiner's citation to Official Notice does not cure the deficiencies of Masters. Each of claims 3, 5-7, 10, 16, 18-19, 33, 34, 39, 42, 43 and 46 depend from, directly or indirectly, one of claims 1, 14, 31 and 40 and therefore include all the limitations of one of those claims. Therefore, Applicants respectfully assert that claims 3, 5-7, 10, 16, 18-19, 33, 34, 39, 42, 43 and 46 are likewise allowable. Accordingly, Applicants respectfully assert that claims 1, 3, 5-7, 10, 14, 16, 18-19, 30, 33, 34, 39, 40, 42, 43 and 46 are in conformity with 35 U.S.C. § 103(a) and are patentable over Masters.

In the Office Action in the parent application, the Examiner rejected claim 25 under 35 U.S.C. § 103(a), as being unpatentable over Masters and further in view of Medard et al. Applicants respectfully traverse the rejection in the parent application of claim 25 under 103(a).

As discussed above, Applicant's independent claim 21 is allowable over Masters; Medard does not cure the deficiencies of Masters. Claim 25 depends from claim 21 and therefore includes all the limitations of claim 21. Applicants respectfully assert that claim 25 is in conformity with 35 U.S.C. § 103(a) and is not anticipated nor rendered obvious by either Masters or Medard, alone or in combination.

In the Office Action in the parent application, the Examiner rejected claim 28 under 35 U.S.C. § 103(a), as being unpatentable over Medard and further in view of Masters. Applicants respectfully traverse the rejection of claim 28 under 103(a).

As discussed above, Applicant's independent claim 26 is allowable over Medard; Masters does not cure the deficiencies of Medard. Claim 28 depends from claim 26 and therefore includes all the limitations of claim 26. Applicants respectfully assert that claim 28 is in conformity with 35 U.S.C. § 103(a) and is not anticipated nor rendered obvious by either Masters or Medard, alone or in combination.

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In the Office Action in the parent application, the Examiner rejected claim 59 under 35 U.S.C. § 103(a), as being unpatentable over Masters and further in view of Official Notice. Applicants respectfully assert that claim 59 is in conformity with 35 U.S.C. § 103(a).

Applicants' claim 59, as amended, includes, inter alia: a material dispenser means for selectively dispensing ... container material ... and support material ... being held in a container comprised of said container material."

As discussed above, Masters does not teach a container made from selectively dispensed material, as required by Applicants' claim 59, as amended. The container of Masters (Fig. 4, ref. 60) is not manufactured by dispensed material, but is part of the object creation device. Official notice does not cure the deficiencies of Masters.

Thus, claim 59 is in conformity with 35 U.S.C. § 103(a), and is not rendered obvious nor anticipated by Masters, alone or in combination with the Examiner's citation to official notice.

In the Office Action in the parent application, the Examiner rejected claims 51-57 under 35 U.S.C. § 103(a), as being unpatentable over Medard as applied to claim 49 above. Applicants respectfully assert that claims 51-57 are in conformity with 35 U.S.C. § 103(a).

Applicants assert, as described above, that amended claim 49 is allowable. Claims 51-57 depend from amended claim 49 and therefore include all the limitations of those claims. Therefore, Applicants respectfully assert that claims 51-57 are likewise allowable. Accordingly, Applicants respectfully assert that claims 49 and 51-57 are in conformity with 35 U.S.C. § 103(a).

#### CONCLUSION

In view of at least the foregoing amendments and remarks, the pending claims are allowable. Their favorable reconsideration and allowance is respectfully requested.

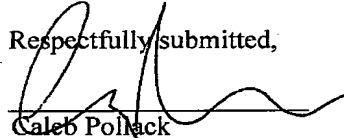
Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the

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prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

No fees are believed to be due in connection with this Amendment. If any fees are due, the Office is hereby authorized to charge such fees to deposit account No. 05-3355.

Respectfully submitted,



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Dated: May 10, 2005

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